

**BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA**

**DOCKET NO. 2021-3-E**

<b>IN THE MATTER OF:</b>	)	<b>SURREBUTTAL TESTIMONY</b>
<b>ANNUAL REVIEW OF BASE RATES</b>	)	<b>OF DEVI GLICK ON BEHALF</b>
<b>FOR FUEL COSTS FOR DUKE</b>	)	<b>OF THE SOUTH CAROLINA</b>
<b>ENERGY CAROLINAS, LLC (FOR</b>	)	<b>COASTAL CONSERVATION</b>
<b>POTENTIAL INCREASE OR</b>	)	<b>LEAGUE AND THE SOUTHERN</b>
<b>DECREASE IN FUEL ADJUSTMENT</b>	)	<b>ALLIANCE FOR CLEAN</b>
<b>AND GAS ADJUSTMENT)</b>	)	<b>ENERGY</b>

**1. INTRODUCTION AND PURPOSE OF TESTIMONY**

1   **Q.     PLEASE STATE YOUR NAME AND OCCUPATION.**

2   **A.**     My name is Devi Glick. I am a Principal Associate at Synapse Energy Economics,  
3           Inc. (“Synapse”). My business address is 485 Massachusetts Avenue, Suite 3,  
4           Cambridge, Massachusetts 02139.

5   **Q.     ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

6   **A.**     I am testifying on behalf of the South Carolina Coastal Conservation League  
7           (“CCL”) and Southern Alliance for Clean Energy (“SACE”).

8   **Q.     HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC SERVICE**  
9           **COMMISSION OF SOUTH CAROLINA (“COMMISSION”)?**

10  **A.**     Yes, I submitted direct testimony in this instant docket. I also submitted testimony  
11           in Docket Nos. 2018-1-E, 2018-2-E, and 2018-3-E.

12  **Q.     WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

13  **A.**     The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of  
14           Duke Energy Carolinas (“DEC” or “the Company”) witness John D. Swez, address  
15           his critiques of my analysis, and reiterate my recommendations for the Commission  
16           to disallow excess fuel costs incurred by DEC as a result of the Company’s  
17           uneconomic unit-commitment practices.

18  **Q.     PLEASE SUMMARIZE YOUR RESPONSE TO THE REBUTTAL**  
19           **TESTIMONY OF COMPANY WITNESS SWEZ.**

20  **A.**     Company Witness Swez makes numerous claims about why the Commission  
21           should ignore my testimony and analysis, based on either misinterpretations of my  
22           testimony or fundamental disagreements between myself and the Company on how

1 to assess the reasonableness and economics of unit commitment decisions. But  
2 Witness Swez does not present any evidence that the costs incurred to operate the  
3 Company's plants are reasonable.

4 In responding to my testimony, Witness Swez claims, among other things,  
5 that: (1) I should have included other large operational costs incurred at coal plants  
6 in my analysis;<sup>1</sup> (2) it is reasonable for DEC to omit large coal-related  
7 transportation costs from unit commitment decisions;<sup>2</sup> and (3) it is not reasonable  
8 to compare DEC's high coal costs to the coal costs at other coal units throughout  
9 the country.<sup>3</sup> But critically, he does not challenge that DEC does in fact incur these  
10 large fuel costs to operate its units.

11 Specifically, Witness Swez provides no justification for why it is reasonable  
12 for DEC to force ratepayers to rely on 6,934 MW of inflexible and un-nimble coal  
13 generation that incurs large start-up, cycling, and other fixed costs every time the  
14 units are operated, and cannot easily turn on and off, ramp up and down, or  
15 otherwise respond quickly to changing system needs. Nor does his testimony justify  
16 why it is reasonable to lock ratepayers into significant transportation contract costs,  
17 or DEC's reliance on coal plants when DEC incurs some of the highest fuel costs  
18 in the country to operate its coal units.

19 **Q. HAVE YOUR RECOMMENDATIONS CHANGED BASED ON THE**  
20 **REBUTTAL TESTIMONY OF COMPANY WITNESS SWEZ?**

21 **A.** No.

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<sup>1</sup> Swez Rebuttal Testimony at 4, 5-6.

<sup>2</sup> Id. at 7.

<sup>3</sup> Id. at 18.

2. UNIT-COMMITMENT ASSUMPTIONS AND CONSIDERATIONS

**Q. HOW DO YOU RESPOND TO WITNESS SWEZ'S CLAIMS THAT YOUR TESTIMONY AND ANALYSIS OMITTED, DID NOT CONSIDER, OR ERRONEOUSLY ASSUMED CERTAIN INPUTS AND ASSUMPTIONS?**

**A.** Witness Swez's arguments are incorrect or seem to result from misinterpretations of my testimony and analysis. Specifically, Witness Swez addresses the following topics:

1. Customer demand: Witness Swez claims that I calculate generator margin based on system lambda data without regard for customer demand.<sup>4</sup> This claim is confusing and unclear, because system lambda is set *based on* the cost of serving customer demand.
2. Dual-fuel operations: Witness Swez further states that I did not acknowledge the ability of the Company's units to operate on gas. However, my analysis included the costs incurred by the Company's to operate its plants on both coal and gas. These steam plants are old and inefficient to operate, regardless of fuel source. The fuel costs differ, but they are still fundamentally more expensive and less nimble than other resources available to the Company.
3. Additional generator costs: Witness Swez claims that I omitted additional generator costs, including no load cost, start-up and shut down costs, from my analysis.<sup>5</sup> But these costs are most relevant to the Company's daily unit

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<sup>4</sup> Id. at 5.

<sup>5</sup> Id. at 6.

1 commitment decisions, that is, whether it turns a unit on or off on a daily  
2 basis. I recommended a \$3.8 million disallowance because my analysis  
3 showed that turning specific units off for much longer periods of time, such  
4 as months, would avoid excess costs. The incremental generator costs  
5 Witness Swez discusses are not the same order of magnitude as the excess  
6 fuel costs I identified.

7 4. Operating a unit for reliability, unit testing, and to provide reserves: Witness  
8 Swez claims I ignored the need to operate units for reliability, operating  
9 reserves, or unit testing.<sup>6</sup> But I did in fact address these issues on pages 14–  
10 15 of my direct testimony. And while it is reasonable for DEC to incur  
11 losses for unique unit testing or reliability events, these events do not  
12 account for patterns of sustained losses; operating these units for reliability,  
13 testing, or to provide reserves explains only individual, isolated instances of  
14 uneconomic commitment decisions. What I observe with DEC is a pattern  
15 of sustained losses. Further, Witness Swez’s claims highlight an even more  
16 fundamental problem with DEC’s operations: if the Company needs to  
17 regularly keep its inflexible coal units online to provide operating reserves  
18 and incurs high fuel costs in the process, that is evidence that ratepayers are  
19 not being well served by these resources.<sup>7</sup> This is something that the  
20 Commission may not clearly see in a resource planning docket, where unit

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<sup>6</sup> Id. at 4, 6.

<sup>7</sup> For example, Witness Swez states that “at times, the Company must turn on a coal unit to ensure that DEC has 1,770 MW of day-ahead planning reserves.” Id. at 10-11.

1 commitment data is not scrutinized, but it is a critical consideration for long-  
2 term resource planning.

3 **Q. HOW DO YOU RESPOND TO WITNESS SWEZ'S CLAIMS THAT THE**  
4 **COMPANY DID PROVIDE THE UNIT-COMMITMENT DATA**  
5 **REQUESTED BY SACE AND CCL?**

6 **A.** In its discovery responses, DEC did not provide the contemporaneous cost data that  
7 it evaluates at the time it makes its daily unit commitment decisions. This means  
8 we had no contemporaneous cost data on DEC's individual units, and no  
9 contemporaneous system lambda. What DEC did provide was after the fact cost  
10 data from the GenTrader model, actual system lambdas, and output of each  
11 resource.<sup>8</sup>

12 **Q. HOW DO YOU RESPOND TO WITNESS SWEZ'S CRITIQUE OF YOUR**  
13 **USE OF SYSTEM LAMBDA?**

14 **A.** Witness Swez claims that system lambda represents the instantaneous system  
15 incremental cost, not what the utility projected at the time it made its unit  
16 commitment decisions. I agree that this is what DEC provided; as I discussed above,  
17 DEC did not provide its contemporaneous unit cost data and system lambda.

18 But the system lambda is more than sufficient to identify the systematic  
19 patterns of excess costs that DEC incurs. Utilities are required to minimize costs  
20 and make the best decisions with the information they have available at the time.  
21 They are not expected to always be right, but they also should not be systematically  
22 and repeatedly wrong. When that is the case, it is evidence of a flaw in their process.

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<sup>8</sup> DEC Response to CCL & SACE Requests 1.3 and 1.11.

1 Utilities serve ratepayers and are expected to adjust and adapt processes or  
2 operations when they are no longer serving the best interest of ratepayers, not make  
3 excuses for why the system makes these losses inevitable. What my analysis shows,  
4 based on the after-the-fact unit cost data and instantaneous system lambda, is that  
5 DEC is incurring excess costs and is not adapting its system to minimize those costs  
6 for ratepayers.

7 **Q. DO YOU BELIEVE FIXED COSTS SHOULD BE INCLUDED IN UNIT**  
8 **COMMITMENT AND DISPATCH DECISIONS?**

9 **A.** Though it is reasonable for truly fixed costs to be omitted from the unit commitment  
10 process, it is not reasonable to structure a contract to lock ratepayers into  
11 unnecessary and excessive fixed costs without adequate analysis and justification.  
12 Here, DEC has locked ratepayers into the majority of its rail transportation contract  
13 costs with a fixed contract structure, all while admitting that this structure no longer  
14 serves customers interests.<sup>9</sup> The reasonableness of fuel and transportation costs  
15 incurred as a result of the contract structure is within the purview of the  
16 Commission in this docket.

17 **3. RELIABILITY AND RESOURCE ADEQUACY**

18 **Q. ARE YOU RECOMMENDING THAT THE COMPANY TURN OFF ALL**  
19 **6,934 MW OF ITS COAL GENERATION, AS WITNESS SWEZ SUGGESTS**  
20 **ON PAGE 9 OF HIS REBUTTAL TESTIMONY?**

21 **A.** No. I never suggest that the Company turn off all 6,934 MW of its coal  
22 generation. My recommendations and analysis instead focus on the *most*

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<sup>9</sup> Phipps Direct Testimony at 8-9.

1 uneconomic periods of operations at DEC's *highest cost* units. During these  
2 times, I find that it would be more economic for DEC to turn off certain coal units  
3 and procure generation from the Company's other existing resources.

4 **Q. ARE YOU RECOMMENDING THAT THE COMPANY TURN ON AND**  
5 **OFF ITS COAL PLANTS DAILY AND THEREFORE INCUR HIGH**  
6 **STARTUP AND SHUTDOWN COSTS, AS WITNESS SWEZ SUGGESTS IN**  
7 **HIS REBUTTAL TESTIMONY?**

8 **A.** No. I never suggest that the Company turn its coal units on and off on a daily  
9 basis. As discussed above, my recommendations and analysis instead focus on  
10 DEC's uneconomic operations of its coal plants over sustained periods of time  
11 (months, not days).

12 **Q. IN PREPARING YOUR DIRECT TESTIMONY, DID YOU CONSIDER**  
13 **OPERATING RESERVES, AND THE NEED TO KEEP A UNIT ONLINE**  
14 **IN CASE IT IS NEEDED TO MEET PEAK THE NEXT HOUR / DAY?**

15 **A.** Yes, I did. But I disagree with DEC that these high cost units must be kept online  
16 to meet reserve requirements. There are less costly resources that the Company can  
17 rely on to ensure adequate operating reserves. Specifically, DEC has or could have  
18 at its disposal more nimble resources, such as gas resources, battery storage, and  
19 paired renewables, which would provide operating reserves and increased grid  
20 flexibility at a lower total cost than the Company's existing coal units. Employing  
21 these lower cost resources does not impact reliability, only the magnitude of costs  
22 passed to ratepayers through this docket.



1 In addition, operating these high cost units to provide operating reserves  
2 makes those units appear more useful, and this in turn reduces the likelihood that  
3 high cost coal will be replaced with less expensive, more nimble resources. This  
4 practice will impact ratepayers in future fuel dockets but may be overlooked during  
5 Integrated Resource Planning proceedings that primarily focus on long term  
6 resource adequacy issues.

7 **Q. HOW DO YOU RESPOND TO WITNESS SWEZ'S CRITIQUE THAT**  
8 **YOUR ANALYSIS USING THE ACTUAL FUEL COST THAT THE**  
9 **COMPANY SEEKS TO PASS ON TO RATEPAYERS IN THIS DOCKET IS**  
10 **MISLEADING?**

11 **A.** I used the Company's average unit fuel data because it is a useful metric to  
12 understand broadly how economic a resource is compared to other available  
13 resources. This information thus indicates not only the prudence of the Company's  
14 fuel costs, but also the prudence of their resource planning. Regardless, my  
15 recommended disallowance is not based on my analysis of the total average costs  
16 incurred to operate each coal plant (or even the total marginal cost for that matter).  
17 The \$3.8 million recommended disallowance represents just the most egregiously  
18 unreasonable of the Company's fuel expenditures – the excess marginal fuel costs  
19 incurred above what marginal fuel costs the Company should have incurred.

20 **Q. HOW DO YOU RESPOND TO WITNESS SWEZ'S CLAIM THAT YOUR**  
21 **COMPARISON OF THE COST OF COAL AT DEC'S COAL UNITS TO**  
22 **THE COST OF COAL AT OTHER UNITS AROUND THE COUNTRY IS**

1           **“OVERSIMPLIFIED” AND OMITTS MANY ASPECTS NECESSARY FOR**  
2           **AN ACCURATE COMPARISON?**

3    **A.**     I understand that there may be reasons why it costs DEC more to produce coal than  
4           other utilities around the country. That information is interesting, but ultimately  
5           irrelevant. If the Company has to incur high costs to procure coal in South Carolina,  
6           that means the Company should switch away from coal in South Carolina – not dig  
7           in its heels and explain why it is justified in paying higher costs for coal than a  
8           utility in Wyoming does. No matter the reasons that coal is particularly expensive  
9           in DEC territory, the fact remains that it is, and that means the Company should be  
10          identifying ways to minimize those high costs to its ratepayers.

11   **Q.     DOES THIS CONCLUDE YOUR TESTIMONY?**

12   **A.**     Yes.

# CERTIFICATE OF SERVICE

I hereby certify that the parties listed below have been served via first class U.S. Mail or electronic mail with a copy of the *Surrebuttal Testimony of Devi Glick* on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy.

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This 10<sup>th</sup> day of September, 2021.

s/Kate Mixson